



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,958	03/02/2004	Mark J. Hampden-Smith	41890-01693	2158

7590 10/11/2005

Marsh Fischmann & Breyfogle LLP
Suite 411
3151 South Vaughn Way
Aurora, CO 80014

EXAMINER

WYSZOMIERSKI, GEORGE P

ART UNIT	PAPER NUMBER
----------	--------------

1742

DATE MAILED: 10/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/790,958

Applicant(s)

HAMPDEN-SMITH ET AL.

Examiner

George P. Wyszomierski

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/2/04 (Divisional Application).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 143-153 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 143-153 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/2/2004 and 7/19/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/11/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 1742

1. The Preliminary Amendments filed in this application on March 2, 2004, July 19, 2004, June 16, 2005 and August 2, 2005 have been entered. With respect to the amendment of July 19, 2004, the examiner is in agreement with Applicant that drawing Figures 47-50 in that amendment contain only material that was fully incorporated by reference at the time the present application was filed. Thus, no new matter issue is raised by that amendment.

2. Claim 149 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The dependency of this claim appears to be mistaken. As presently drafted, the term "said dielectric material" lacks proper antecedent basis. For purposes of examination, the examiner will treat claim 149 as dependent on claim 148.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 143, 144, and 147-152 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dietz (U.S. Patent 3,673,092).

Column 7, lines 6-50 of Dietz discloses forming a paste including particles 2-3 microns in size and comprising 17.6% Pd, along with various dielectric oxides including titanium oxide, and

Art Unit: 1742

a liquid organic vehicle. The combined pastes are fired at 875 degrees C to form a coating onto a ceramic substrate.

Dietz does not disclose the crystallite size recited in instant claim 143, the oxidation resistance value (under thermogravimetric analysis or any other method) recited in instant claim 143, or the size distribution limitations recited in instant claim 144. These differences are not seen as resulting in a patentable distinction between the prior art and the claimed invention because:

a) With respect to crystallite size, the Dietz method does not limit the crystallite size and would include processes performed using particles having the presently claimed crystallite size. Thus, this aspect of the claimed invention is held to be within the purview of the process disclosed by Dietz.

b) The oxidation resistance of a material would be largely determined by the composition and physical structure of that material. Because these parameters may be the same in either the prior art or the claimed process, no patentable distinction is seen in this aspect of the invention.

c) Nothing in the Dietz disclosure would indicate that any significant amount of the metal particles are outside the 2-3 micron range specified in the prior art.

Thus, a prima facie case of obviousness is established between the disclosure of Dietz and the presently claimed invention.

5. Claims 143-147 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asada et al. (U.S. Patent 5,402,303).

Asada discloses forming palladium particles 0.6 micron in size and further containing a small amount of a second material. The second material is held by the examiner to be

"dielectric" in accord with claim 147, in the absence of any numerical definition of this term.

Tables 1-3 of Asada discloses examples in which the oxidation rate of the palladium (relative to theoretical complete oxidation) is less than the 40% maximum permitted by instant claim 143.

These particles are mixed with ethylcellulose and a solvent to form a paste, which is printed onto a barium titanate green sheet; see Asada column 6, lines 7-28.

Asada does not specify the crystallite size of the particles as recited in instant claim 143, and does not disclose the size distribution limitations recited in instant claim 144. These differences are not seen as resulting in a patentable distinction between the prior art and the claimed invention because the Asada method does not limit the crystallite size and would include processes performed using particles having the presently claimed crystallite size. Thus, this aspect of the claimed invention is held to be within the purview of the process disclosed by Asada. Further, noting in the Asada disclosure would indicate that any significant amount of the metal particles are more than twice the average size.

Thus, a prima facie case of obviousness is established between the disclosure of Asada et al. and the presently claimed invention.

6. Claim 152 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asada et al. in view of Dietz.

Asada, described supra, does not specify heating the particles to a temperature as recited in the instant claim. Dietz column 7, line 33 indicates that it was known in the art, at the time of the invention, to employ a temperature as presently claimed when making films from metal-containing particles by a substantially similar process. This disclosure of Dietz would have rendered the use of a temperature as presently claimed obvious in the process as disclosed by Asada et al.

7. Claims 143-153 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 133-148 of copending Application No. 10/774,791.

Although the conflicting claims are not identical, they are not patentably distinct from each other because both the instant claims and the '791 claims are directed to a process of forming films on a substrate by firing pastes including small noble metal particles of a certain size and distribution, and further including many substantially identical limitations in their respective dependent claims; compare instant claims 145-152 with '791 claims 133-141. The '791 claims involve making a silver-containing film, as opposed to making a palladium-containing film in the instant claims. However, note that the paste of '791 claim 143 includes not only "particles including silver" but also second particles including palladium. Note also that both the instant claims and the '791 claims employ open language with respect to the composition of the particles, e.g. the claims refer to palladium-containing and silver-containing films and particles, and are thus open to the inclusion of additional materials. Thus, no patentable distinction is seen between the process as recited in the '791 claims and that of the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

Art Unit: 1742

patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).


Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. The remainder of the art cited on the attached PTO-892 and 1449 forms is of interest. This art is held to be no more relevant to the claimed invention than the art as applied in the rejections, supra.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. Effective July 15, 2005, all patent application related correspondence transmitted by facsimile must be directed to the new central facsimile number, (571)-273-8300. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


GEORGE WYSZOMIERSKI
PRIMARY EXAMINER
GROUP 1742

GPW
September 22, 2005